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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/559,627 04/27/00 YUKITAKE

T JEL 29186C-R

EXAMINER

WM01/0207

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ART UNIT

PAPER NUMBER

2613

DATE MAILED:

02/07/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.  
**09/559,627**

Applicant(s)  
**Yukitake et al**

Examiner  
**Richard Lee**

Group Art Unit  
**2613**



☐ Responsive to communication(s) filed on \_\_\_\_\_

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1-31 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☒ Claim(s) 1-7, 14-19, and 29-31 is/are allowed.

☒ Claim(s) 8-13 and 20-28 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been  
☐ received.

☒ received in Application No. (Series Code/Serial Number) 07/970,046.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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1. The Official drawings filed April 27, 2000 are acceptable.
2. It is noted that the cited Gillard patent no. 4,864,294 as shown in the IDS filed June 21, 2000 is incorrect. The reference should be patent no. 4,864,394 instead. The Examiner has made the correction in the IDS filed June 21, 2000 (see attached PTO-1449). No further action is required by the applicants.
3. The offer to surrender the Letters Patent No. 5,745,182 granted on April 28, 1998 is acknowledged. However, the applicants are reminded that the original patent or declaration as to its loss must be submitted prior to allowance.
4. Claims 12, 13, 22, 23, and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For examples:

(1) claim 12, line 23, "another" should be changed to "second" in order to provide proper antecedent basis for the same as specified at line 9;

(2) claim 13, line 23, "another" should be changed to "second" in order to provide proper antecedent basis for the same as specified at line 9; and

(3) claim 22, line 13, "MV2" should be changed to "MV1" in order to provide proper antecedent basis for the same as specified at lines 5-6.

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5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

6. Claims 8-11 and 20-27 are rejected under 35 U.S.C. 102(a) as being anticipated by Yukitake of record "Field-time Adjusted MC for frame-base coding".

Yukitake discloses a field time adjusted motion compensation for frame base coding as shown in Figures 1 and B.1, and the same method and apparatus as claimed in claims 8-11 and 20-27 of determining and obtaining motion compensation for an input image, determining a motion compensated image from a reference image having a plurality of parts and a motion vector of the reference image, the method and apparatus comprising the same providing a first motion vector MV (i.e., MV<sub>frm</sub> for frames f<sub>0</sub> to f<sub>2</sub> as shown in Figure B.1) between the input image/motion compensated image and a reference image part r<sub>1</sub> of one reference image R<sub>1</sub> having a plurality of reference image parts; calculating a second motion vector MV<sub>2</sub> (i.e., MV<sub>frm</sub> for frames f<sub>1</sub> to f<sub>3</sub> as shown in Figure B.1) between the input image/motion compensated image and a reference image part r<sub>2</sub> of another reference image R<sub>2</sub> having a plurality of reference image parts, from the first motion vector MV<sub>1</sub>; calculating pixel values of the reference image parts r<sub>1</sub> and r<sub>2</sub> from peripheral pixels at positions corresponding to the first and second motion vectors

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MV1 and MV2, wherein the reference images R1 and R2 are such that a motion vector MV3 (i.e., MVfld of Figure B.1) between the reference image parts r1 and r2 has a mathematical relationship with the first and second motion vectors MV1 and MV2 in which the motion vector MV3 is parallel to and different in value from each of the first and second motion vectors MV1 and MV2, wherein the reference images R1 and R2 are previous to the input image in a time sequence (see Figure B.1); and calculating the motion compensation for the input image from the pixel values of the reference image parts r1 and r2 to determine the motion compensated image (see pages 1 and 8).

7. Claims 9, 11, 24, and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Krause et al of record (5,093,720).

Krause et al discloses a motion compensation for interlaced digital television signals as shown in Figures 3 and 4, and the same method and apparatus of determining motion compensation for an input image as claimed in claims 9, 10, 24, and 25, comprising the same providing a first motion vector (i.e., 26 of Figure 4 and see column 5, lines 55-65) between the input image/motion compensated image and a reference image part r1 of one reference image R1 having a plurality of reference image parts (see Figure 3); calculating a second motion vector MV2 (see 28 of Figure 4) between the input image/motion compensated image and a reference image part r2 of another reference image R2 having a plurality of reference image parts, from the first motion vector (see Figure 3); calculating pixel values of the reference image parts r1 and r2 from peripheral pixels at positions corresponding to the first and second motion vectors MV1 and

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MV2, wherein the reference images R1 and R2 are previous to the input image in a time sequence (see Figure 3); and calculating the motion compensated (i.e., 19 of Figure 4) pixel values of the input image from the pixel values of the reference image parts r1 and r2 to determine the motion compensation.

8. Claims 9, 11, 24, and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Odaka et al of record (6,016,162).

Odaka et al discloses a video coding apparatus as shown in Figures 7, 9, 11-16, 17, and 24-26, and the same method and apparatus of determining motion compensation for an input image as claimed in claims 9, 10, 24, and 25, comprising the same providing a first motion vector (i.e., 710 of Figure 17, see Figure 25A and columns 17-20 ) between the input image/motion compensated image and a reference image part r1 of one reference image R1 having a plurality of reference image parts; calculating a second motion vector MV2 (711 of Figure 17, see Figure 25B and columns 17-20) between the input image/motion compensated image and a reference image part r2 of another reference image R2 having a plurality of reference image parts, from the first motion vector; calculating pixel values of the reference image parts r1 and r2 from peripheral pixels at positions corresponding to the first and second motion vectors MV1 and MV2, wherein the reference images R1 and R2 are previous to the input image in a time sequence (see Figures 25A and 25B); and calculating the motion compensated (i.e., 709 of Figure 17 and see columns 17-20) pixel values of the input image from the pixel values of the reference image parts r1 and r2 to determine the motion compensation.

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9. Claims 12, 13, and 28 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2<sup>nd</sup> paragraph, set forth in this Office action.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sugiyama discloses an apparatus for adaptive interframe predictive encoding of video signal.

Samad et al discloses a motion dependent video signal processing.

11. Claims 1-7, 14-19, and 29-31 are allowed.

12. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

(703) 308-9051, (for formal communications intended for entry)

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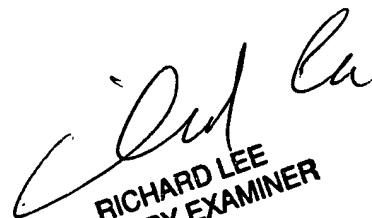
Or:

(703) 308-6306 (for informal or draft communications, please label  
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington, VA., Sixth Floor (Receptionist).

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Lee whose telephone number is (703) 308-6612.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4700.

  
RICHARD LEE  
PRIMARY EXAMINER

Richard Lee/rl



2/2/01